

### Look-Up Table Addressing Scheme

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5 CROSS-REFERENCE TO RELATED APPLICATION

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The present application is related to concurrently filed U.S. patent application No.: xx/xxx,xxx (~~Attorney Docket No. M-7976-US~~), entitled "An Implementation of a Turbo Decoder" of W. S. Yuan; concurrently filed U.S. patent application No.: <sup>09 905521</sup>xx/xxx,xxx (~~Attorney Docket No. M-8833-US~~), entitled "Look-up Table Index Value Generation in a Turbo Decoder" of Zhang et al.; and concurrently filed U.S. patent application No.: <sup>09 905780</sup>xx/xxx,xxx (~~Attorney Docket No. M-8928-US~~), entitled "A Stop Iteration Criterion for Turbo Decoding" of Yuan et al. The applications referenced herein and the present application are commonly assigned and have at least one common inventor.

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BACKGROUND OF THE INVENTION

1. Field Of The Invention

The invention generally relates to the field of error correction codes for communication systems, and in particular, the present invention relates to implementations of turbo decoding methods and systems.

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2. Background of the Invention

In digital communication systems, information (such as data or voice) are transmitted through a channel which is often noisy. The noisy channel introduces errors in the information being transmitted such that the information received at the receiver is different from the information transmitted. To reduce the probability that noise in the channel could corrupt the transmitted information, communication systems typically employ some sort of error correction scheme. For instance, wireless data communication systems, operated in a low signal to noise ratio (SNR) environment, typically employ forward error correction (FEC) schemes. When FEC coding is used, the transmitted message is encoded with sufficient

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